

Letter to Commissioner of Patents, undated

IN THE UNITED STATES PATENT OFFICE. ROOM 240, Sr. No. 159, 556, Filed June 1, 1903, Alex. Graham Bell, Aerial Vehicles & Other Structures. Hon. Commissioner of Patents, Sir:

Please amend as follows:

Erase claims 6 and 7 (original 8 and 9).

Claim 14 (original 16) before the period (.) at the end of the claim insert — when the vehicle is in equilibrium —

Renumber the claims.

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REMARKS.

Official letter of March 18, 1904 has been received, and we cannot refrain from an expression of surprise at its contents in view of previous official actions. It would appear to be the beginning de novo of the prosecution of the case, and the reopening of discussion, not only upon references which have been carefully considered and whose bearing upon the case has been well and properly adjudicated, but also upon new citations more remote than those previously presented.

In this communication we will assume that explanations elaborately made in our previous communications are before the Examiner, and need not be repeated. If we may make this assumption, there will be no need of a long reply to the last official letter.

Mills, U. S. patent No. 574,835, which is the principal reference now relied upon, should not have been cited at all, since it has no relation whatever to applicant's invention.

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Granting that the body shown in Fig. 2 is an “element” (Fig. 1 being composed of two of these bodies) it is not a tetrahedron (much less a skeleton tetrahedron) but a “three-sided body” having a flat top, and two diagonal sides, each of the latter making in its entire length “a transverse twist of ninety degrees” (p. 1, 2d col.).

Hence, Fig. 1 is not composed of skeleton tetrahedral elements, nor of tetrahedral elements, nor of skeleton elements, nor is it indeed a tetrahedron, because its sides are not plane surfaces. Each of its sides twist s ninety degrees in its entire length, and hence all its edges are curved.

It would require painstaking search to find a structure whose principles are more remote from those upon which applicant's invention is based.

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British Patent No. 9062 of 1895 is also very wide of the mark. We have here a vessel whereof that part of the hull which is submerged has “approximately the form of an elongated tetrahedron, but modified in such manner that the corners are rounded off”, etc., etc. The advantages of applicant's structure lie mainly in the geometric form of the skeleton frame. In the reference we have neither the geometric form, nor the skeleton frame.

It is thoughtthat, after five official actions and numerous discussions and explanations, we should not be called upon to examine and distinguish from structures so remote as those referred to above.

This disposes of the references to claims 1, 2, 3, 4, 5, 15, 16 and 17 of last amendment, and we do not fell called upon to discuss these claims in detail. The tetrahedral elements, or skeleton tetrahedral elements, or connected tetrahedral cells, constitute the distinguishing features of these claims.

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Nares, British patent No. 2494 of 1861. This patent discloses no tetrahedral framework, and no cellular structure, and is therefore, upon broad grounds, distinguished from applicant's invention. We have, however, thought it proper to withdraw claims 6 and 7 as not sufficiently definite.

Claim 14 (now 12) has been amended to avoid the formal objection.

The rejection is without merit. Wings which make angles “approximating forty-five degrees with respect to the horizon”, do not embody the invention. If the Examiner will read from line 7, page 8 of the specification to line 17, page 9, he will find a description of a self-righting capacity produced by applicant's construction, and which is not referred to in any citation. The discovery appears to be broadly new, and the means are novel. That means of adjusting the wings to any desired angle have always existed, is not denied, and does not affect the novelty of the invention.

Claim 17 (now 15).

We have already shown that Mills patent does not disclose a body composed of tetrahedral cells, and hence there is no valid ground of rejection of the claim. This fact also disposes of the objection of indefiniteness. We do not rely upon any limitation by reason of the words “as described”, it being immaterial how the relatively large interspace is obtained. Of course, the words “relatively large” mean that the interspace is large relatively to the space enclosed by one of the cells itself. In the Mills structure the two bodies are put together in such manner as not to form any interspace at all.

We ask allowance of the case.

Respectfully, Attys.